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MEMORANDUM

TO: Lynda Deschambault, Remedial Project Manager
Site Cleanup Section 1, SFD-7-1

THROUGH: Rose Fong, ESAT Task Order Manager (TOM) RF
Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager
Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041
Technical Direction Form No.: 00405051

DATE: May 4, 2009

SUBJECT: Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Omega Chem OU2
Site Account No.:	09 BC QB02
CERCLIS ID NO.:	CAD042245001
Case No.:	38274
SDG No.:	Y4N51
Laboratory:	Mitkem Laboratories (MITKEM)
Analysis:	Trace Volatiles
Samples:	20 Ground Water Samples (see Case Summary)
Collection Date:	March 2 through 5, 2009
Reviewer:	April Martinez, ESAT/Laboratory Data Consultants

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

cc: Jennie Han-Liu, CLP PO USEPA Region 1
Steve Remaley, CLP PO USEPA Region 9

CLP PO: [X] Attention [ ] Action

SAMPLING ISSUES: [X] Yes [ ] No

Data Validation Report - Tier 3

Case No.: 38274
SDG No.: Y4N51
Site: Omega Chem OU2
Laboratory: Mitkem Laboratories (MITKEM)
Reviewer: April Martinez, ESAT/LDC
Date: May 4, 2009

I. CASE SUMMARY

Sample Information

Samples:	Y4N51 through Y4N53, Y4N55 through Y4N70, and Y4N73
Concentration and Matrix:	Low/Medium Concentration Water
Analysis:	Trace Volatiles
SOW:	SOM01.2
Collection Date:	March 2 through 5, 2009
Sample Receipt Date:	March 3 through 6, 2009
Extraction Date:	Not Applicable
Analysis Date:	March 5, 9, 10, 12, and 13, 2009

Field QC

Field Blanks (FB):	Y4N63, Y4N67, and Y4N79 (in SDG Y4N71)
Equipment Blanks (EB):	Not provided
Trip Blank (TB):	Not provided
Background Samples (BG):	Not provided
Field Duplicates (D1):	Y4N60 and Y4N61

Laboratory QC

Method Blanks & Associated Samples:

VBLK5Q:	Y4N51, Y4N52
VBLK5S:	Y4N53, Y4N55, Y4N56
VBLK5T:	Y4N57 through Y4N70
VBLK5U:	Y4N73, Y4N73MS, and Y4N73MSD
VBLKB5:	Y4N57DL through Y4N62DL, Y4N65DL, Y4N66DL, Y4N68DL through Y4N70DL, Y4N73DL
VBLKC5:	Y4N64DL and storage blank VHBLKC5

Tables

1A:	Analytical Results with Qualifications
1B:	Data Qualifier Definitions for Organic Data Review
2:	Calibration Summary

CLP PO Action

None.

CLP PO Attention

1. Detected results for chloroform in samples Y4N57 through Y4N62 and Y4N66 are qualified as nondetected and estimated (U,J) due to field blank contamination (see Comment B).

2. Results for some analytes are qualified as estimated (J) due to calibration problems (see Comments C and D).

3. Results for some analytes are qualified as estimated (J) due to deuterated monitoring compound (DMC) recovery problems (see Comment E).

4. Results for some analytes in samples Y4N57, Y4N58, Y4N59, Y4N61, Y4N64, and Y4N66 are qualified as estimated (J) due to internal standard (IS) area problems (see Comment F).

Sampling Issues

Detected results for chloroform in samples Y4N57 through Y4N62 and Y4N66 are qualified as nondetected and estimated (U,J) due to field blank contamination (see Comment B).

Additional Comments

Other than a laboratory artifact (approximate retention time of 6.9 minutes), tentatively identified compounds (TICs) were found in samples Y4N57, Y4N64, Y4N68, Y4N70, and Y4N73 (see attached Form 1Js).

This report was prepared in accordance with the following documents:

- ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services Volatile and Semivolatile Data Packages*;

- *USEPA Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration*, SOM01.1, May 2005;

- *Modifications Updating SOM01.1 to SOM01.2*, Amended April 11, 2007; and

- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, July 2007.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	Parameter	Acceptable	Comment
1.	Holding Time/Preservation	Yes	
2.	GC/MS Tune/GC Performance	Yes	
3.	Initial Calibration	No	C
4.	Continuing Calibration Verification	No	C, D
5.	Laboratory Blanks	No	B
6.	Field Blanks	No	B
7.	Deuterated Monitoring Compounds	No	E
8.	Matrix Spike/Matrix Spike Duplicate	No	G
9.	Laboratory Control Sample/Duplicate	N/A	
10.	Internal Standards	No	F
11.	Compound Identification	Yes	
12.	Compound Quantitation	Yes	A, H, I
13.	System Performance	Yes	
14.	Field Duplicate Sample Analysis	Yes	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

A. The following results, denoted with an "L" qualifier, are estimated and flagged "J" in Table 1A.

- All detected results below the contract required quantitation limits

Results below the contract required quantitation limits (CRQLs) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

B. The following results are qualified as nondetected and estimated due to method blank and field blank contamination and are flagged "U,J" in Table 1A.

- Methylene chloride in storage blank VHBLKC5
- Chloroform in samples Y4N55, Y4N57 through Y4N62, Y4N66, and Y4N68

Methylene chloride was found in method blanks VBLK5S, VBLK5T, VBLK5U, and VBLKC5 and chloroform was found in field blanks Y4N63, Y4N67, and Y4N79 (see Table 1A for concentrations). Results for the samples listed above are considered nondetected and estimated (U,J) and quantitation limits have been raised according to blank qualification rules presented below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result and

reported as nondetected. If the sample result is less than the CRQL, the result is reported as nondetected at the CRQL.

A laboratory method blank is laboratory reagent water or baked sand analyzed with all reagents, deuterated monitoring compounds, and internal standards and carried through the same sample preparation and analytical procedures as the field samples. The laboratory method blank is used to determine the level of contamination introduced by the laboratory during analysis.

A field blank is clean water prepared as a sample in the field by the sampler and shipped to the laboratory with the samples. A field blank is intended to detect contaminants that may have been introduced in the field, although any laboratory-introduced contamination will be present. Contaminants that are found in the field blank which are absent in the laboratory method blank could be indicative of a field QC problem, a deficiency in the bottle preparation procedure, a difference in preparation of the laboratory and field blanks, or other indeterminate error.

C. Results for the following analyte are qualified as estimated due to low RRFs in initial calibration and continuing calibration verifications (CCVs) and are flagged "J" in Table 1A.

- 2-Butanone in samples Y4N53, Y4N55 through Y4N70, and Y4N73 and method blanks VBLK5S, VBLK5T, and VBLK5U

RRFs were below the 0.05 validation criterion for 2-butanone in CCVs (see Table 2). Since results are nondetected, false negatives may exist.

DMCs 2-butanone-d5 and 2-hexanone-d5 also had RRFs below the 0.05 validation criterion in the initial calibration and CCVs (see Table 2). Quantitation of the analytes associated with these DMCs may have been affected by low RRFs (see attached Table 9 from the Functional Guidelines).

The RRF evaluates instrument sensitivity and is used in the quantitation of target analytes.

D. Results for the following analyte are qualified as estimated due to a large percent difference (%D) in the CCV and are flagged "J" in Table 1A.

- Bromomethane in method blank VBLKC5 and storage blank VHBLKC5

A %D of +31.6% was reported for bromomethane in the 03/13/09 09:03 CCV, which exceeded the $\pm$30.0% validation criterion for opening CCVs.

The continuing calibration checks the instrument performance daily and produces the relative response factors (RRFs) for target analytes that are used for quantitation.

E. Results for the following analytes are qualified as estimated due to DMC recoveries outside QC limits and are flagged "J" in Table 1A.

{Chloroethane-d5}
- Dichlorodifluoromethane, chloromethane, bromomethane, chloroethane, and carbon disulfide in sample Y4N51

{1,1-Dichloroethene-d2}
- 1,1-Dichloroethene and cis-1,2-dichloroethene in samples Y4N57 through Y4N62, Y4N66, Y4N69, and Y4N73
- 1,1-Dichloroethene, trans-1,2-dichloroethene and cis-1,2-dichloroethene in samples Y4N64 and Y4N65
- 1,1-Dichloroethene in samples Y4N68 and Y4N70

{Chloroform-d}
- 1,1-Dichloroethane in sample Y4N64

{Benzene-d6}
- Benzene in sample Y4N64

{Toluene-d8}
- Trichloroethene in sample Y4N66

DMC recoveries outside QC limits are shown below.

Sample	DMC	% Recovery	QC Limit
Y4N57	Vinyl chloride-d3	140	65-131
Y4N58	Vinyl chloride-d3	145	65-131
Y4N59	Vinyl chloride-d3	138	65-131
Y4N60	Vinyl chloride-d3	132	65-131
Y4N61	Vinyl chloride-d3	135	65-131
Y4N62	Vinyl chloride-d3	134	65-131
Y4N63	Vinyl chloride-d3	144	65-131
Y4N64	Vinyl chloride-d3	139	65-131
Y4N65	Vinyl chloride-d3	132	65-131
Y4N66	Vinyl chloride-d3	131	65-131
Y4N67	Vinyl chloride-d3	133	65-131
Y4N68	Vinyl chloride-d3	132	65-131
Y4N69	Vinyl chloride-d3	139	65-131
Y4N73	Vinyl chloride-d3	135	65-131
Y4N73MSD	Vinyl chloride-d3	136	65-131
Y4N57DL	Vinyl chloride-d3	149	65-131
Y4N58DL	Vinyl chloride-d3	157	65-131
Y4N59DL	Vinyl chloride-d3	155	65-131
Y4N60DL	Vinyl chloride-d3	160	65-131
Y4N61DL	Vinyl chloride-d3	161	65-131

Sample	DMC	% Recovery	QC Limit
Y4N62DL	Vinyl chloride-d3	158	65-131
Y4N65DL	Vinyl chloride-d3	171	65-131
Y4N66DL	Vinyl chloride-d3	170	65-131
Y4N68DL	Vinyl chloride-d3	170	65-131
Y4N69DL	Vinyl chloride-d3	172	65-131
Y4N70DL	Vinyl chloride-d3	168	65-131
Y4N73DL	Vinyl chloride-d3	159	65-131
Y4N64DL	Vinyl chloride-d3	172	65-131
Y4N51	Chloroethane-d5	65	71-131
Y4N51	1,1-Dichloroethene-d2	106	55-104
Y4N52	1,1-Dichloroethene-d2	109	55-104
Y4N57	1,1-Dichloroethene-d2	116	55-104
Y4N58	1,1-Dichloroethene-d2	132	55-104
Y4N59	1,1-Dichloroethene-d2	120	55-104
Y4N60	1,1-Dichloroethene-d2	118	55-104
Y4N61	1,1-Dichloroethene-d2	112	55-104
Y4N62	1,1-Dichloroethene-d2	127	55-104
Y4N63	1,1-Dichloroethene-d2	121	55-104
Y4N64	1,1-Dichloroethene-d2	113	55-104
Y4N65	1,1-Dichloroethene-d2	117	55-104
Y4N66	1,1-Dichloroethene-d2	124	55-104
Y4N67	1,1-Dichloroethene-d2	117	55-104
Y4N68	1,1-Dichloroethene-d2	128	55-104
Y4N69	1,1-Dichloroethene-d2	120	55-104
Y4N73	1,1-Dichloroethene-d2	129	55-104
Y4N73MS	1,1-Dichloroethene-d2	122	55-104
Y4N73MSD	1,1-Dichloroethene-d2	129	55-104
Y4N58DL	1,1-Dichloroethene-d2	112	55-104
Y4N59DL	1,1-Dichloroethene-d2	108	55-104
Y4N60DL	1,1-Dichloroethene-d2	112	55-104
Y4N61DL	1,1-Dichloroethene-d2	117	55-104
Y4N62DL	1,1-Dichloroethene-d2	114	55-104
Y4N65DL	1,1-Dichloroethene-d2	115	55-104
Y4N66DL	1,1-Dichloroethene-d2	117	55-104
Y4N68DL	1,1-Dichloroethene-d2	122	55-104
Y4N69DL	1,1-Dichloroethene-d2	123	55-104
Y4N70DL	1,1-Dichloroethene-d2	122	55-104
Y4N73DL	1,1-Dichloroethene-d2	113	55-104
Y4N64DL	1,1-Dichloroethene-d2	131	55-104
Y4N64	Chloroform-d	125	78-121
Y4N58	Benzene-d6	129	77-124
Y4N62	Benzene-d6	129	77-124
Y4N64	Benzene-d6	231	77-124
Y4N65	Benzene-d6	143	77-124
Y4N66	Benzene-d6	131	77-124
Y4N70	Benzene-d6	135	77-124

Sample	DMC	% Recovery	QC Limit
Y4N73	Benzene-d6	124	77-124
Y4N64	1,2-Dichloropropane-d6	156	79-124
Y4N64	Toluene-d8	195	77-121
Y4N65	Toluene-d8	123	77-121
Y4N66	Toluene-d8	126	77-121
Y4N70	Toluene-d8	122	77-121
Y4N64	trans-1,3-Dichloropropene-d4	153	73-121
Y4N64	1,1,2,2-Trichloroethane-d2	128	73-125

Detected results for affected analytes where DMC recoveries fell below QC limits may be biased low; where results are nondetected, false negatives may exist. Detected results for affected analytes where DMC recoveries exceeded QC limits may be biased high. For DMC recoveries that exceeded QC limits, only detected results for associated analytes are qualified. Recoveries for DMCs vinyl chloride-d3, 1,2-dichloropropane-d6, trans-1,3-dichloropropene-d4, and 1,1,2,2-tetrachloroethane-d2 exceeded QC limits but associated sample results were not qualified because they were nondetects. The samples were not reanalyzed undiluted.

Surrogates (e.g., deuterated monitoring compounds (DMCs)) are organic compounds which are similar to the target analytes in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples. All samples are spiked with DMCs prior to purging. DMCs provide information about both the laboratory performance on individual samples and the possible effects of the sample matrix on the analytical results.

F. Results for the following analytes are qualified as estimated due to low internal standard (IS) areas and are flagged "J" in Table 1A.

- All analytes except trichloroethene in sample Y4N58
- All analytes except tetrachloroethene in sample Y4N59

{Chlorobenzene-d5}

- 1,1,1-Trichloroethane, cyclohexane, carbon tetrachloride, benzene, , methylcyclohexane, 1,2-dichloropropane, bromodichloromethane, cis-1,3-dichloropropane, 4-methyl-2-pentanone, toluene, trans-1,3-dichloropropene, 1,1,2-trichloroethane, 2-hexanone, dibromochloromethane, 1,2-dibromoethane, chlorobenzene, ethylbenzene, o-xylene, m,p-xylenes, styrene, isopropylbenzene, and 1,1,2,2-tetrachloroethane in sample Y4N64

{1,4-Dichlorobenzene-d4}

- Bromoform, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, and 1,2,3-trichlorobenzene in samples Y4N57, Y4N61, Y4N64, and Y4N66

IS areas outside QC limits are shown below.

Sample	Internal Standard	Area	QC Limit
Y4N57	1,4-Dichlorobenzene-d_4	37738	44804-104544
Y4N58	1,4-Dichlorobenzene-d_4	32311	44804-104544
Y4N58	1,4-Difluorobenzene	149475	154276-359978
Y4N58	Chlorobenzene-d5	86241	100090-233542
Y4N59	1,4-Dichlorobenzene-d4	31822	44804-104544
Y4N59	1,4-Difluorobenzene	149179	154276-359978
Y4N59	Chlorobenzene-d5	84195	100090-233542
Y4N61	1,4-Dichlorobenzene-d4	43896	44804-104544
Y4N64	1,4-Dichlorobenzene-d4	36159	44804-104544
Y4N64	Chlorobenzene-d5	55034	100090-233542
Y4N66	1,4-Dichlorobenzene-d4	40644	44804-104544

Detected results and quantitation limits for the affected analytes are considered quantitatively questionable. Where results are nondetected, false negatives may exist. The samples were not reanalyzed undiluted.

Internal standards, introduced into every calibration standard, blank, sample, and QC sample, monitor changes in analyte response due to matrix effects and fluctuations in instrument sensitivity throughout the analytical sequence. Internal standards are used to quantitate the concentration of target analytes and surrogate standards.

G. The matrix spike/matrix spike duplicate percent recoveries for trichloroethene in QC samples Y4N73MS (140%) and Y4N73MSD (132%) did not meet the criterion for accuracy (71-120%) specified in the SOW. These recoveries are not meaningful because the concentration of trichloroethene in sample Y4N73 (68 ug/L) is significantly higher than the spike concentration of 5.0 ug/L.

Matrix spike sample analysis provides information about the effect of the sample matrix on sample preparation and measurement.

H. Sample Y4N57 was reanalyzed at a 4-fold dilution due to high levels of trichloroethene and tetrachloroethene that exceeded the calibration range. Results for these analytes in sample Y4N57 are reported from the diluted analysis in Table 1A; results for other analytes are reported from the undiluted analysis.

Samples Y4N58, Y4N69, and Y4N73 were reanalyzed at 8-, 5-, and 5-fold dilutions, respectively, due to high levels of trichloroethene that exceeded the calibration range. Results for trichloroethene in samples Y4N58, Y4N69, and Y4N73 are reported from the diluted analyses in Table 1A; results for other analytes are reported from the undiluted analyses.

Samples Y4N59, Y4N60, Y4N61, Y4N62, and Y4N66 were reanalyzed at 5-, 2-, 4-, 10-, and 10-fold dilutions, respectively, due to high levels of tetrachloroethene that

exceeded the calibration range. Results for tetrachloroethene in samples Y4N59, Y4N60, Y4N61, Y4N62, and Y4N66 are reported from the diluted analyses in Table 1A; results for other analytes are reported from the undiluted analyses.

Sample Y4N64 was reanalyzed at an 80-fold dilution due to high levels of trichlorofluoromethane, 1,1-dichloroethene, 1,1,2-trichloro-1,2,2-trifluoroethane, cis-1,2-dichloroethene, chloroform, trichloroethene, and tetrachloroethene that exceeded the calibration range. Results for these analytes in sample Y4N64 are reported from the diluted analysis in Table 1A; results for other analytes are reported from the undiluted analysis.

Sample Y4N65 was reanalyzed at a 25-fold dilution due to high levels of 1,1-dichloroethene, 1,1,2-trichloro-1,2,2-trifluoroethane, trichloroethene, and tetrachloroethene that exceeded the calibration range. Results for these analytes in sample Y4N65 are reported from the diluted analysis in Table 1A; results for other analytes are reported from the undiluted analysis.

Sample Y4N68 was reanalyzed at a 2-fold dilution due to high levels of 1,1,2-trichloro-1,2,2-trifluoroethane and tetrachloroethene that exceeded the calibration range. Results for these analytes in sample Y4N68 are reported from the diluted analysis in Table 1A; results for other analytes are reported from the undiluted analysis.

Sample Y4N70 was reanalyzed at a 20-fold dilution due to high levels of trichlorofluoromethane, 1,1-dichloroethene, 1,1,2-trichloro-1,2,2-trifluoroethane, trichloroethene, and tetrachloroethene that exceeded the calibration range. Results for these analytes in sample Y4N70 are reported from the diluted analysis in Table 1A; results for other analytes are reported from the undiluted analysis.

I. Data users should note that the diluted concentrations for tetrachloroethene in the following samples are significantly lower than the undiluted concentrations.

Sample	Analyte	Undiluted Conc., µg/L	Diluted Conc., µg/L
Y4N60	Tetrachloroethene	28	15
Y4N64	Tetrachloroethene	1800	1000
Y4N65	Tetrachloroethene	200	130
Y4N66	Tetrachloroethene	120	78
Y4N68	Tetrachloroethene	21	9
Y4N70	Tetrachloroethene	180	110

ANALYTICAL RESULTS

Table 1A

Case No. : 38274 SDG No. : Y4N51

Site : OMEGA CHEMICAL OU2

Lab : MITKEM LABORATORIES

Reviewer : April Martinez, ESAT/LDC

Date : 05/04/09

QUALIFIED DATA

Concentration in ug/L

Analysis Type : Trace Level Water Samples for Trace Volatiles

Station Location :	MW3			MW7			MW11			MW21			1			2		
Sample ID :	Y4N51			Y4N52			Y4N53			Y4N55			Y4N56			Y4N57		
Collection Date :	3/2/2009			3/2/2009			3/2/2009			3/2/2009			3/3/2009			3/3/2009		
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Dichlorodifluoromethane	0.50U	J	E	0.50U			0.50U			0.50U			0.50U			0.50U		
Chloromethane	0.50U	J	E	0.50U			0.50U			0.50U			0.50U			0.50U		
Vinyl chloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromomethane	0.50U	J	E	0.50U			0.50U			0.50U			0.50U			0.50U		
Chloroethane	0.50U	J	E	0.50U			0.50U			0.50U			0.50U			0.50U		
Trichlorofluoromethane	0.50U			0.50U			0.50U			0.50U			0.50U			2.1		
1,1-Dichloroethene	0.50U			0.50U			0.50U			0.22L	J	A	0.50U			3.0	J	E
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50U			0.40L	J	A	0.50U			0.50U			0.50U			4.5		
Acetone	5.0U			5.0U			5.0U			5.0U			5.0U			5.0U		
Carbon disulfide	0.50U	J	E	0.50U			0.50U			0.50U			0.50U			0.50U		
Methyl acetate	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Methylene chloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
trans-1,2-Dichloroethene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Methyl tert-butyl ether	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1-Dichloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
cis-1,2-Dichloroethene	0.50U			0.50U			0.50U			0.50U			0.50U			0.37L	J	AE
2-Butanone	5.0U			5.0U			5.0U	J	C	5.0U	J	C	5.0U	J	C	5.0U	J	C
Bromochloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloroform	0.50U			0.50U			0.50U			0.95U	J	B	0.50U			0.50U	J	B
1,1,1-Trichloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Cyclohexane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Carbon tetrachloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Benzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dichloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Trichloroethene	0.50U			0.50U			0.50U			0.50U			0.90			44		H
Methylcyclohexane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		

ANALYTICAL RESULTS
Table 1A

Case No. : 38274 SDG No. : Y4N51
Site : OMEGA CHEMICAL OU2
Lab : MITKEM LABORATORIES
Reviewer : April Martinez, ESAT/LDC
Date : 05/04/09

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Trace Level Water Samples for Trace Volatiles

Station Location :	MW3			MW7			MW11			MW21			1			2		
Sample ID :	Y4N51			Y4N52			Y4N53			Y4N55			Y4N56			Y4N57		
Collection Date :	3/2/2009			3/2/2009			3/2/2009			3/2/2009			3/3/2009			3/3/2009		
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
1,2-Dichloropropane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromodichloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
cis-1,3-Dichloropropene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
4-Methyl-2-pentanone	5.0U			5.0U			5.0U			5.0U			5.0U			5.0U		
Toluene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
trans-1,3-Dichloropropene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1,2-Trichloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Tetrachloroethene	0.50U			0.38L	J	A	3.0			0.94			1.9			30		H
2-Hexanone	5.0U			5.0U			5.0U			5.0U			5.0U			5.0U		
Dibromochloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dibromoethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Ethylbenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
o-Xylene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
m,p-Xylene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Styrene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromoform	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U	J	F
Isopropylbenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1,2,2-Tetrachloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,3-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U	J	F
1,4-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U	J	F
1,2-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U	J	F
1,2-Dibromo-3-chloropropane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U	J	F
1,2,4-Trichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U	J	F
1,2,3-Trichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U	J	F

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation LImit
N/A - Not Applicable
NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank,
TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS
Table 1A

Case No. : 38274 SDG No. : Y4N51
Site : OMEGA CHEMICAL OU2
Lab : MITKEM LABORATORIES
Reviewer : April Martinez, ESAT/LDC
Date : 05/04/09

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Trace Level Water Samples for Trace Volatiles

Station Location :	3			4			5			6			7			8		
Sample ID :	Y4N58			Y4N59			Y4N60		D1	Y4N61		D1	Y4N62			Y4N63		FB
Collection Date :	3/3/2009			3/3/2009			3/3/2009			3/3/2009			3/3/2009			3/3/2009		
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Dichlorodifluoromethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Chloromethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Vinyl chloride	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Bromomethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Chloroethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Trichlorofluoromethane	0.84	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
1,1-Dichloroethene	0.67	J	EF	0.61	J	EF	0.44L	J	AE	0.52	J	E	2.5	J	E	0.50U		
1,1,2-Trichloro-1,2,2-trifluoroethane	1.6	J	F	0.30L	J	AF	0.50U			0.31L	J	A	0.45L	J	A	0.50U		
Acetone	5.0U	J	F	5.0U	J	F	5.0U			5.0U			5.0U			5.0U		
Carbon disulfide	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Methyl acetate	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Methylene chloride	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
trans-1,2-Dichloroethene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Methyl tert-butyl ether	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
1,1-Dichloroethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
cis-1,2-Dichloroethene	0.30L	J	AEF	2.7	J	EF	1.2	J	E	1.4	J	E	2.6	J	E	0.50U		
2-Butanone	5.0U	J	CF	5.0U	J	CF	5.0U	J	C	5.0U	J	C	5.0U	J	C	5.0U	J	C
Bromochloromethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Chloroform	0.64U	J	BF	0.50U	J	BF	0.50U	J	B	0.50U	J	B	0.50U	J	B	0.40L	J	A
1,1,1-Trichloroethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Cyclohexane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Carbon tetrachloride	0.23L	J	AF	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Benzene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
1,2-Dichloroethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Trichloroethene	79	J	H	7.3	J	F	3.7			4.3			20			0.50U		
Methylcyclohexane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		

ANALYTICAL RESULTS
Table 1A

Case No. : 38274 SDG No. : Y4N51
Site : OMEGA CHEMICAL OU2
Lab : MITKEM LABORATORIES
Reviewer : April Martinez, ESAT/LDC
Date : 05/04/09

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Trace Level Water Samples for Trace Volatiles

Station Location :	3			4			5			6			7			8		
Sample ID :	Y4N58			Y4N59			Y4N60		D1	Y4N61		D1	Y4N62			Y4N63		FB
Collection Date :	3/3/2009			3/3/2009			3/3/2009			3/3/2009			3/3/2009			3/3/2009		
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
1,2-Dichloropropane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Bromodichloromethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
cis-1,3-Dichloropropene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
4-Methyl-2-pentanone	5.0U	J	F	5.0U	J	F	5.0U			5.0U			5.0U			5.0U		
Toluene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
trans-1,3-Dichloropropene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
1,1,2-Trichloroethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Tetrachloroethene	2.5	J	F	49	J	H	15		HI	33		H	79		H	0.50U		
2-Hexanone	5.0U	J	F	5.0U	J	F	5.0U			5.0U			5.0U			5.0U		
Dibromochloromethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
1,2-Dibromoethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Chlorobenzene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Ethylbenzene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
o-Xylene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
m,p-Xylene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Styrene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
Bromoform	0.50U	J	F	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U		
Isopropylbenzene	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
1,1,2,2-Tetrachloroethane	0.50U	J	F	0.50U	J	F	0.50U			0.50U			0.50U			0.50U		
1,3-Dichlorobenzene	0.50U	J	F	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U		
1,4-Dichlorobenzene	0.50U	J	F	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U		
1,2-Dichlorobenzene	0.50U	J	F	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U		
1,2-Dibromo-3-chloropropane	0.50U	J	F	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U		
1,2,4-Trichlorobenzene	0.50U	J	F	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U		
1,2,3-Trichlorobenzene	0.50U	J	F	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U		

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation Limit
N/A - Not Applicable
NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank,
TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS

Table 1A

Case No. : 38274 SDG No. : Y4N51
Site : OMEGA CHEMICAL OU2
Lab : MITKEM LABORATORIES
Reviewer : April Martinez, ESAT/LDC
Date : 05/04/09

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Trace Level Water Samples for Trace Volatiles

Station Location :	9			10			11			12			13			14		
Sample ID :	Y4N64			Y4N65			Y4N66			Y4N67		FB	Y4N68			Y4N69		
Collection Date :	3/4/2009			3/4/2009			3/4/2009			3/4/2009			3/5/2009			3/5/2009		
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Dichlorodifluoromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Vinyl chloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromomethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Trichlorofluoromethane	150		H	15			0.50U			0.50U			14			0.50U		
1,1-Dichloroethene	340	J	EH	44	J	EH	3.7	J	E	0.50U			18	J	E	4.8	J	E
1,1,2-Trichloro-1,2,2-trifluoroethane	420		H	46		H	0.50U			0.50U			19		H	0.50U		
Acetone	45			15			5.0U			5.0U			5.0U			5.0U		
Carbon disulfide	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Methyl acetate	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Methylene chloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
trans-1,2-Dichloroethene	2.0	J	E	0.62	J	E	0.50U			0.50U			0.50U			0.50U		
Methyl tert-butyl ether	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1-Dichloroethane	1.0	J	E	0.28L	J	A	0.50U			0.50U			0.50U			0.50U		
cis-1,2-Dichloroethene	170	J	EH	18	J	E	0.32L	J	AE	0.50U			0.50U			17	J	E
2-Butanone	5.0U	J	C	5.0U	J	C	5.0U	J	C	5.0U	J	C	5.0U	J	C	5.0U	J	C
Bromochloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloroform	62		H	7.1			0.50U	J	B	0.42L	J	A	0.80U	J	B	0.50U		
1,1,1-Trichloroethane	0.23L	J	AF	0.50U			0.50U			0.50U			0.50U			0.50U		
Cyclohexane	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
Carbon tetrachloride	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
Benzene	0.44L	J	AEF	0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dichloroethane	4.1			0.50U			0.50U			0.50U			0.50U			0.50U		
Trichloroethene	790		H	220		H	15	J	E	0.50U			3.1			46		H
Methylcyclohexane	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		

ANALYTICAL RESULTS
Table 1A

Case No. : 38274 SDG No. : Y4N51
Site : OMEGA CHEMICAL OU2
Lab : MITKEM LABORATORIES
Reviewer : April Martinez, ESAT/LDC
Date : 05/04/09

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Trace Level Water Samples for Trace Volatiles

Station Location :	9			10			11			12			13			14		
Sample ID :	Y4N64			Y4N65			Y4N66			Y4N67		FB	Y4N68			Y4N69		
Collection Date :	3/4/2009			3/4/2009			3/4/2009			3/4/2009			3/5/2009			3/5/2009		
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
1,2-Dichloropropane	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
Bromodichloromethane	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
cis-1,3-Dichloropropene	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
4-Methyl-2-pentanone	5.0U	J	F	5.0U			5.0U			5.0U			5.0U			5.0U		
Toluene	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
trans-1,3-Dichloropropene	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
1,1,2-Trichloroethane	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
Tetrachloroethene	1000		HI	130		HI	78		HI	0.50U			9		HI	1.3		
2-Hexanone	5.0U	J	F	5.0U			5.0U			5.0U			5.0U			5.0U		
Dibromochloromethane	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dibromoethane	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
Chlorobenzene	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
Ethylbenzene	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
o-Xylene	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
m,p-Xylene	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
Styrene	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
Bromoform	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U			0.50U		
Isopropylbenzene	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
1,1,2,2-Tetrachloroethane	0.50U	J	F	0.50U			0.50U			0.50U			0.50U			0.50U		
1,3-Dichlorobenzene	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U			0.50U		
1,4-Dichlorobenzene	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U			0.50U		
1,2-Dichlorobenzene	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U			0.50U		
1,2-Dibromo-3-chloropropane	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U			0.50U		
1,2,4-Trichlorobenzene	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U			0.50U		
1,2,3-Trichlorobenzene	0.50U	J	F	0.50U			0.50U	J	F	0.50U			0.50U			0.50U		

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation LImit
N/A - Not Applicable
NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank,
TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS

Case No. : 38274 SDG No. : Y4N51 **Table 1A**

Site : OMEGA CHEMICAL OU2

Lab : MITKEM LABORATORIES

Reviewer : April Martinez, ESAT/LDC **QUALIFIED DATA** **Analysis Type :** Trace Level Water Samples

Date : 05/04/09 **Concentration in ug/L** for Trace Volatiles

Station Location :	15			18			Method Blank			Method Blank			Method Blank			Method Blank		
Sample ID :	Y4N70			Y4N73			VBLK5Q			VBLK5S			VBLK5T			VBLK5U		
Collection Date :	3/5/2009			3/5/2009														
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Dichlorodifluoromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Vinyl chloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromomethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Trichlorofluoromethane	45		H	2.3			0.50U			0.50U			0.50U			0.50U		
1,1-Dichloroethene	100	J	EH	5.1	J	E	0.50U			0.50U			0.50U			0.50U		
1,1,2-Trichloro-1,2,2-trifluoroethane	95		H	7.1			0.50U			0.50U			0.50U			0.50U		
Acetone	30			5.0U			5.0U			5.0U			5.0U			5.0U		
Carbon disulfide	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Methyl acetate	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Methylene chloride	0.50U			0.50U			0.50U			0.28L	J	A	0.24L	J	A	0.23L	J	A
trans-1,2-Dichloroethene	0.20L	J	A	0.50U			0.50U			0.50U			0.50U			0.50U		
Methyl tert-butyl ether	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1-Dichloroethane	0.37L	J	A	0.50U			0.50U			0.50U			0.50U			0.50U		
cis-1,2-Dichloroethene	2.1			0.42L	J	AE	0.50U			0.50U			0.50U			0.50U		
2-Butanone	5.0U	J	C	5.0U			5.0U			5.0U	J	C	5.0U	J	C	5.0U		
Bromochloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chloroform	15			1.1			0.50U			0.50U			0.50U			0.50U		
1,1,1-Trichloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Cyclohexane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Carbon tetrachloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Benzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dichloroethane	1.7			0.50U			0.50U			0.50U			0.50U			0.50U		
Trichloroethene	100		H	68		HG	0.50U			0.50U			0.50U			0.50U		
Methylcyclohexane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		

ANALYTICAL RESULTS
Table 1A

Case No. : 38274 SDG No. : Y4N51
Site : OMEGA CHEMICAL OU2
Lab : MITKEM LABORATORIES
Reviewer : April Martinez, ESAT/LDC
Date : 05/04/09

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Trace Level Water Samples for Trace Volatiles

Station Location :	15			18			Method Blank			Method Blank			Method Blank			Method Blank		
Sample ID :	Y4N70			Y4N73			VBLK5Q			VBLK5S			VBLK5T			VBLK5U		
Collection Date :	3/5/2009			3/5/2009														
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
1,2-Dichloropropane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromodichloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
cis-1,3-Dichloropropene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
4-Methyl-2-pentanone	5.0U			5.0U			5.0U			5.0U			5.0U			5.0U		
Toluene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
trans-1,3-Dichloropropene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1,2-Trichloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Tetrachloroethene	110		HI	18			0.50U			0.50U			0.50U			0.50U		
2-Hexanone	5.0U			5.0U			5.0U			5.0U			5.0U			5.0U		
Dibromochloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dibromoethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Chlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Ethylbenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
o-Xylene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
m,p-Xylene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Styrene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Bromoform	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
Isopropylbenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,1,2,2-Tetrachloroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,3-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,4-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2-Dibromo-3-chloropropane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2,4-Trichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		
1,2,3-Trichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50U		

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. *Refer to the Corresponding Section in the Narrative for each letter.*
CRQL - Contract Required Quantitation LImit
N/A - Not Applicable
NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank,
TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS
Table 1A

Case No. : 38274 SDG No. : Y4N51
Site : OMEGA CHEMICAL OU2
Lab : MITKEM LABORATORIES
Reviewer : April Martinez, ESAT/LDC
Date : 05/04/09

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Trace Level Water Samples for Trace Volatiles

Station Location :	Method Blank			Method Blank			Storage Blank											
Sample ID :	VBLKB5			VBLKC5			VHBLKC5			CRQL								
Collection Date :																		
Dilution Factor :	1.0			1.0			1.0											
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Dichlorodifluoromethane	0.50U			0.50U			0.50U			0.50								
Chloromethane	0.50U			0.50U			0.50U			0.50								
Vinyl chloride	0.50U			0.50U			0.50U			0.50								
Bromomethane	0.50U			0.50U	J	D	0.50U	J	D	0.50								
Chloroethane	0.50U			0.50U			0.50U			0.50								
Trichlorofluoromethane	0.50U			0.50U			0.50U			0.50								
1,1-Dichloroethene	0.50U			0.50U			0.50U			0.50								
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50U			0.50U			0.50U			0.50								
Acetone	5.0U			5.0U			5.0U			5.0								
Carbon disulfide	0.50U			0.50U			0.50U			0.50								
Methyl acetate	0.50U			0.50U			0.50U			0.50								
Methylene chloride	0.50U			0.21L	J	A	0.50U	J	B	0.50								
trans-1,2-Dichloroethene	0.50U			0.50U			0.50U			0.50								
Methyl tert-butyl ether	0.50U			0.50U			0.50U			0.50								
1,1-Dichloroethane	0.50U			0.50U			0.50U			0.50								
cis-1,2-Dichloroethene	0.50U			0.50U			0.50U			0.50								
2-Butanone	5.0U			5.0U			5.0U			5.0								
Bromochloromethane	0.50U			0.50U			0.50U			0.50								
Chloroform	0.50U			0.50U			0.50U			0.50								
1,1,1-Trichloroethane	0.50U			0.50U			0.50U			0.50								
Cyclohexane	0.50U			0.50U			0.50U			0.50								
Carbon tetrachloride	0.50U			0.50U			0.50U			0.50								
Benzene	0.50U			0.50U			0.50U			0.50								
1,2-Dichloroethane	0.50U			0.50U			0.50U			0.50								
Trichloroethene	0.50U			0.50U			0.50U			0.50								
Methylcyclohexane	0.50U			0.50U			0.50U			0.50								

ANALYTICAL RESULTS
Table 1A

Case No. : 38274 SDG No. : Y4N51
Site : OMEGA CHEMICAL OU2
Lab : MITKEM LABORATORIES
Reviewer : April Martinez, ESAT/LDC
Date : 05/04/09

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Trace Level Water Samples for Trace Volatiles

Station Location :	Method Blank			Method Blank			Storage Blank											
Sample ID :	VBLKB5			VBLKC5			VHBLKC5			CRQL								
Collection Date :																		
Dilution Factor :	1.0			1.0			1.0											
Trace Volatiles	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
1,2-Dichloropropane	0.50U			0.50U			0.50U			0.50								
Bromodichloromethane	0.50U			0.50U			0.50U			0.50								
cis-1,3-Dichloropropene	0.50U			0.50U			0.50U			0.50								
4-Methyl-2-pentanone	5.0U			5.0U			5.0U			5.0								
Toluene	0.50U			0.50U			0.50U			0.50								
trans-1,3-Dichloropropene	0.50U			0.50U			0.50U			0.50								
1,1,2-Trichloroethane	0.50U			0.50U			0.50U			0.50								
Tetrachloroethene	0.50U			0.50U			0.50U			0.50								
2-Hexanone	5.0U			5.0U			5.0U			5.0								
Dibromochloromethane	0.50U			0.50U			0.50U			0.50								
1,2-Dibromoethane	0.50U			0.50U			0.50U			0.50								
Chlorobenzene	0.50U			0.50U			0.50U			0.50								
Ethylbenzene	0.50U			0.50U			0.50U			0.50								
o-Xylene	0.50U			0.50U			0.50U			0.50								
m,p-Xylene	0.50U			0.50U			0.50U			0.50								
Styrene	0.50U			0.50U			0.50U			0.50								
Bromoform	0.50U			0.50U			0.50U			0.50								
Isopropylbenzene	0.50U			0.50U			0.50U			0.50								
1,1,2,2-Tetrachloroethane	0.50U			0.50U			0.50U			0.50								
1,3-Dichlorobenzene	0.50U			0.50U			0.50U			0.50								
1,4-Dichlorobenzene	0.50U			0.50U			0.50U			0.50								
1,2-Dichlorobenzene	0.50U			0.50U			0.50U			0.50								
1,2-Dibromo-3-chloropropane	0.50U			0.50U			0.50U			0.50								
1,2,4-Trichlorobenzene	0.50U			0.50U			0.50U			0.50								
1,2,3-Trichlorobenzene	0.50U			0.50U			0.50U			0.50								

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation Limit
N/A - Not Applicable
NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank,
TB - Trip Blank, BG - Background Sample

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," January 2005.

U The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

L Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.

J The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Table 2
Calibration Summary

Case No.: 38274
SDG No.: Y4N51
Site: Omega Chem OU2
Laboratory: Mitkem Laboratories
Reviewer: April Martinez, ESAT/LDC
Date: May 4, 2009

RELATIVE RESPONSE FACTORS (RRF)

	RRF	RRF	RRF	RRF	RRF
Analysis date:	3/5/09	3/5/09	3/9/09	3/9/09	3/10/09
Analysis time:	10:38-	21:02	10:09	21:10	09:06
GC/MS I.D.:	V5	V5	V5	V5	V5
Analyte	Init.	CCV	CCV	CCV	CCV
2-Butanone	------	------	0.049	0.044	0.045
2-Butanone-d5	0.044	0.038	0.043	0.039	0.038
2-Hexanone-d5	0.032	0.033	0.041	0.044	0.033

	RRF	RRF
Analysis date:	3/12/09	3/10/09
Analysis time:	18:30-	20:28
GC/MS I.D.:	V5	V5
Analyte	Init.	CCV
2-Butanone	------	------
2-Butanone-d5	------	0.044
2-Hexanone-d5	0.049	0.040

ASSOCIATED SAMPLES AND METHOD BLANKS

Initial 03/05/09:	All samples and method blanks VBLK5Q, VBLK5S, VBLK5T, and VBLK5U
CCV, 03/05/09 (21:02):	Y4N51, Y4N52, and VBLK5Q
CCV, 03/09/09 (10:09):	Y4N53, Y4N55, Y4N56, and VBLK5S
CCV, 03/09/09 (21:10):	Y4N53, Y4N55, Y4N56, and VBLK5S; Y4N57 throughY4N70 and VBLK5T
CCV, 03/10/09 (09:06):	Y4N57 throughY4N70 and VBLK5T; Y4N73, Y4N73MS, Y4N73MSD, and VBLK5U
CCV, 03/10/09 (20:28):	Y4N73, Y4N73MS, Y4N73MSD, and VBLK5U
Initial 03/05/09:	Y4N57DL throughY4N70DL, Y4N73DL, VBLKB5, VBLKC5, and VHBLKC5
CCV, 03/13/09 (09:03):	Y4N57DL throughY4N70DL, Y4N73DL, VBLKB5, VBLKC5, and VHBLKC5

Table 9. Volatile Deuterated Monitoring Compounds (DMCs) and the Associated Target Compounds

Chloroethane-d_5 (DMC)	1,2-Dichloropropane-d_6 (DMC)	1,2-Dichlorobenzene-d_4 (DMC)
Dichlorodifluoromethane	Cyclohexane	Chlorobenzene
Chloromethane	Methylcyclohexane	1,3-Dichlorobenzene
Bromomethane	1,2-Dichloropropane	1,4-Dichlorobenzene
Chloroethane	Bromodichloromethane	1,2-Dichlorobenzene
Carbon disulfide		1,2,4-Trichlorobenzene
		1,2,3-Trichlorobenzene
trans-1,3-Dichloropropene-d4 (DMC)	Chloroform-d (DMC)	2-Hexanone-d_5 (DMC)
cis-1,3-Dichloropropene	1,1-Dichloroethane	4-Methyl-2-pentanone
trans-1,3-Dichloropropene	Bromochloromethane	2-Hexanone
1,1,2-Trichloroethane	Chloroform	
	Dibromochloromethane	
	Bromoform	
2-Butanone-d_5 (DMC)	1,1-Dichloroethene-d_2 (DMC)	1,1,2,2-Tetrachloroethane-d_2 (DMC)
Acetone	trans-1,2-Dichloroethene	1,1,2,2,-Tetrachlororethane
2-Butanone	1,1-Dichloroethene	1,2-Dibromo-3-chloropropane
	cis-1,2-Dichloroethene	
Vinyl chloride-d_3 (DMC)	Benzene-d_6 (DMC)	Toluene-d_8 (DMC)
Vinyl chloride	Benzene	Trichloroethene
		Toluene
		Tetrachloroethene
		Ethylbenzene
		o-Xylene
		m,p-Xylene
		Styrene
		Isopropylbenzene
1,2-Dichloroethane-d_4 (DMC)		
Trichlorofluoromethane		
1,1,2-Trichloro-1,2,2-trifluoroethane		
Methyl acetate		
Methylene chloride		
Methyl-tert-butyl ether		
1,1,1-Trichloroethane		
Carbon tetrachloride		
1,2-Dibromoethane		
1,2-Dichloroethane		

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y4N57

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 38274 Mod. Ref No.: SDG No.: Y4N51

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: H0295-06A

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: V5K5769.D

Level: (TRACE or LOW/MED) TRACE Date Received: 03/04/2009

% Moisture: not dec. Date Analyzed: 03/10/2009

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	2.435	0.59	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y4N64

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 38274 Mod. Ref No.: SDG No.: Y4N51

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: H0295-13A

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: V5K5776.D

Level: (TRACE or LOW/MED) TRACE Date Received: 03/05/2009

% Moisture: not dec. Date Analyzed: 03/10/2009

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	354-23-4	~~Unknown-01~~ Ethane, 1,2-dichloro-1,1,2-trifluoro-	2.654	0.67	JN
02		Unknown-02	2.723	0.88	J
	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

SL, 5/4/09

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y4N68

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 38274 Mod. Ref No.: SDG No.: Y4N51

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: H0295-17A

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: V5K5780.D

Level: (TRACE or LOW/MED) TRACE Date Received: 03/06/2009

% Moisture: not dec. Date Analyzed: 03/10/2009

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	354-23-4	Ethane, 1,2-dichloro-1,1,2-t	2.657	4.6	NJ
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y4N70

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 38274 Mod. Ref No.: SDG No.: Y4N51

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: H0295-19A

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: V5K5782.D

Level: (TRACE or LOW/MED) TRACE Date Received: 03/06/2009

% Moisture: not dec. Date Analyzed: 03/10/2009

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	354-23-4	Ethane, 1,2-dichloro-1,1,2-t	2.661	5.6	NJ
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1J - FORM I VOA-TIC

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y4N73

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 38274 Mod. Ref No.: SDG No.: Y4N51

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: H0295-20A

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: V5K5786.D

Level: (TRACE or LOW/MED) TRACE Date Received: 03/06/2009

% Moisture: not dec. Date Analyzed: 03/10/2009

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	2.434	0.61	J
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.